SMS Ltd provides sand monitoring using best in class, field proven technology. After extensive testing of acoustic monitoring systems, we identified the instrumentation to give our clients the edge they require.

System Overview

The Real-Time UT Wall Thickness Monitoring System is a series of installed UT wall thickness sensors, which form a monitoring array. The system measures absolute wall thickness with no averaging or extrapolation, this allows early identification of corrosion/erosion activity, areas of high-risk can be monitored continuously.

Features

Continuous monitoring
- Early identification of wall loss at high-risk areas

Flexible Array
- Up to 16 sensors per location allows greatest coverage of high risk areas

Data Alarming Integration
- Realtime data and alarming integration to end user acquisition or database

Non-intrusive
- Mounted externally via a banding strap

Zone 2
- For use in Zone 2 applications

Benefits

Increased safety
- No need for personnel to inspect high-risk areas

Reduced costs
- No requirement for offshore manual operations

Real-Time Erosion / Corrosion Measurement
- Informs real-time decision making, risk assessment allowing increased reliability and safe operations

Remote Monitoring
- Save on manpower and offshore bed space
Specifications

Transmitter
Model no .................................................. PIMS 100 Modbus
Protocol ....................................................... Modbus
Communication ........................................... RS-485, 2-wire, max. 1000'
Power ......................................................... 10-20 VDC

Ultrasonic System;
- channels .................................................. 16 ultrasonic, 1 temperature
- pulser voltage ........................................... ±5V bipolar square wave
- receiver .................................................... 1–10 MHz (-3dB)
- gain ......................................................... -10dB to +70dB
- digitalizer frequency .................................. 40 Msp
- certification ............................................. Class 1, Div. 1, ATEX Zone 1 (coming 2Q16)

Enclosure
- type ......................................................... instrumentation housing
- material ..................................................... aluminium
- rating ....................................................... Class 1, Div. 1, Group BCD, NEMA 4X, IP66
- dimensions/weight .................................... 5" × 5¼" × 4¼" / 4 lbs.

Tablet Datalogger
Performance
- processor .................................................. Intel i5-4200U 1.6GHz w/ 3MB L3 cache dual-core
- memory ..................................................... 8 GB RAM
- storage ..................................................... M2-SATA SSD, 64 GB
- operating system ....................................... Windows 10
- connections ............................................. network power, data via RS-485-to-USB adapter physical
- drop/shock resistance ................................. MIL-STD-810G
- environmental .......................................... IP65, 14–131°F (-10 to +55 °C)
- dimensions/weight .................................... 11.4" × 7.48" × 0.78" / 2.73 lbs

Transducer Cable
- Type .............................................................. armoured, ¾” dia.
- Maximum length to transducer ............... standard 10’ (3.0m), custom to 25’ (7.6m)

Transducers

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<th>single-element contact</th>
<th>delay-line contact</th>
<th>dual-element</th>
<th>single-beam or shear-wave</th>
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<tr>
<td>material</td>
<td>frequency</td>
<td>transmit</td>
<td>receive</td>
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